

JIB-1571\_SequenceListing\_07-18-11\_ST25.txt  
SEQUENCE LISTING

<110> winter Sederoff, Heike  
Huber, Steven C  
Larabell, Carolyn A

<120> SYNTHETIC PEPTIDES THAT CAUSE F-ACTIN BUNDLING AND BLOCK ACTIN  
DEPOLYMERIZATION

<130> JIB-1571

<140> 10/576,757  
<141> 2006-04-20

<150> US 60/513,275  
<151> 2003-10-20

<160> 30

<170> PatentIn version 3.5

<210> 1  
<211> 15  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic consensus active Zea mays Sucrose Synthase (SuSy)  
peptide

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<210> 4  
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 <223> synthetic peptide derived from Drosophila melanogaster Actin 2 protein and Homo sapiens beta and gamma Actin proteins

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Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
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<210> 6  
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<220>  
 <223> synthetic peptide derived from Drosophila melanogaster Actin 3, 5, and 6 proteins and Homo sapiens alpha Actin protein

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Glu His Gly Ile Ile Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
 1 5 10 15

<210> 7  
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<400> 7

Glu His Gly Ile Val Lys Asp Trp Asn Asp Met Glu Arg Ile Trp  
 1 5 10 15

<210> 8  
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Gly	Asp	Arg	Val	Leu	Ser	Arg	Leu	His	Ser	Val	Arg	Glu	Arg	Ile	Gly
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Lys

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<223> SS2 active peptide based on Zea mays SuSy 377-392

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Lys Lys

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Ile	Leu	Arg	Val	Pro	Phe	Arg	Thr	Glu	Asn	Gly	Ile	Val	Arg	Lys
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<223> SS15 less active synthetic peptide

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<221> SITE

<222> (6)..(6)

<223> replaced Tryptophan residue with Alanines

<220>

<221> SITE

<222> (13)..(13)

<223> replaced Tryptophan residue with Alanine

<400> 13

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<210> 14

<211> 9

<212> PRT

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<223> SS16 less active synthetic peptide corresponding to short middle portion of SS12 synthetic peptide

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Ser Arg Phe Glu Val Trp Pro Tyr Leu  
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<211> 19

<212> PRT

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<220>

<223> NR11 inactive synthetic peptide

<400> 15

Gly Pro Thr Leu Lys Arg Thr Ala Ser Thr Ala Phe Met Asn Thr Thr  
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Ser Lys Lys

<210> 16  
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Arg Arg Ile Ser Ser Val Glu Asp Lys Lys  
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 <223> synthetic peptide of Drosophila melanogaster Actin protein consensus sequence

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Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp His  
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His Thr Phe Tyr  
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<210> 20  
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<210> 22  
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<220>  
<223> Core minimum block of SS12 sequence required for less active  
synthetic peptide

<400> 22

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<210> 23  
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<220>  
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<220>  
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Tyr Leu Lys Lys  
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 <223> X=His or Asn

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 <223> X= Val or Leu or Ile

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 <221> VARIANT  
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 <223> X= Arg or Thr or Lys

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 <223> X= Lys, Asn, Asp

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 <222> (9)..(9)  
 <223> X= Ile or Asp or Asn

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 <223> X= Arg or Met

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<222> (12)..(12)
<223> X= Glu, Phe, Cys, or Lys

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<223> X= Ile, Leu, or Val

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<223> X= Phe or none

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<221> VARIANT
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<223> X= Tyr or none

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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp Xaa
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Xaa Xaa Xaa Xaa
          20

<210> 26
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<220>
<223> Motif for a synthetic peptide which causes actin bundling and
inhibits actin depolymerization

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<223> X = any amino acid

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<220>  
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 <222> (4)..(4)  
 <223> X = Ile or Val

<220>  
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 <223> X = any amino acid

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 <222> (9)..(14)  
 <223> X = any amino acid

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Glu	Xaa	Gly	Xaa	Xaa	Xaa	Xaa	Trp	Xaa	Xaa	Xaa	Xaa	Xaa	Trp
1			5					10					15

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<220>  
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 <221> VARIANT  
 <222> (7)..(7)  
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 <223> X= any amino acid

<220>  
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 <222> (14)..(14)  
 <223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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 1 5 10 15

<210> 28  
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 <223> X = Ile, Val, or Leu

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 <222> (4)..(4)  
 <223> X = Arg, Lys, Asn, or Thr

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 <221> VARIANT  
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 <223> X = Arg, Lys, Asn, or Asp

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 <221> VARIANT  
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<220>  
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<220>  
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<220>  
 <221> VARIANT  
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 <221> VARIANT  
 <222> (16)..(16)  
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<210> 29  
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 <212> PRT  
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<220>  
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 <223> X = any amino acid

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 <223> SS2 and SS12 subsequence necessary for peptide activity

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